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TREATISE

ONTHE

Nature, Properties, and Medicinal Uses

OF THE

WATERS

O F

PYRMONT, SPA, and SELTZERS.

ALSO OF THE

MALVERN WATERS,

From Dr. WALL'S OBSERVATIONS.

BEINGA

Proper Supplement to Dr. RUSSEL's DISSERTATION,

ON THE

USE of SEA WATER, &c.

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TREATISE

ONTHE

NATURE, PROPERTIES, &c.

OF

MEDICINAL WATERS.

Of the PYRMONT WATER.

HIS Water hath for Ages been in the highest Repate for its Medicinal Virtues. Pyrmont is a Town in Germany, in the Circle of Westphalia, on the Confines of Brunswick, and lies about forty Miles South-west of Hanover, East Longitude 90, Latitude 52. It is the Capital of a County of the same Name, has a strong Castle, and was formerly subject to its own Lords; but now belongs to the Counts of Waldeck, who nominate a Governor. There are a great Resort of German and other Nobility, to drink the Waters. In the Neighbourhood there are one or two Salt Pits; and not far from the Town are his Majesty's Silver and Iron Mines.

In Order to a just Comparison of this celebrated Water, both with the German Spa,

and our ordinary English and Irish Chalybeates, I shall, after describing its sensible Qualities, and shewing its superior Strength, relate the Experiments made on it in common, with other Chalybeate Waters. By the Smell, we difcover in the Wells a sulphureous Vapour, which makes the Water-Servers giddy, and it is from this, that Fifth, Frogs, Ducks, and Goslings, when thrown into these Wells, grow giddy, lose their Strength, and at last fall down. This is also what affects Mankind on drinking it, with a kind of Intoxication or Drunkenness, and is probably owing to the Acid of Sulphur, greatly fubtilized. They also abound with Air, or an elastic Vapour, more than the common Acidules, whence, when they are to be transported to distant Places, the Bottles must be not only not quite filled, but left open some Hours, lest they burst; and moreover, they should be kept some Time before they are drank. I observed the rising of the Bubbles, confequent upon pouring it out into a Glass, from a well-corked Bottle, to continue eight Hours, when the like Bubbles from bottled Ale, did not continue above four Hours. It is of a Taste, first Acid, like Wine, pungent and refreshing, afterwards austere and like Vitriol. It is exquisitely lympid, notwithstanding the large Proportion of Contents it yields. The Water is observed to suffer no Change as to Strength, by wet or dry Weather, and is, indeed one of (if not absolutely) the richest of all Chalybeates; as appears, 1. By the great Quantity of ochreous Sediment it yields. 2. By the redder Colour of the same. 3. It retained its vitriolic Taste, when it had been exposed three Days in a wide-mouthed Glass, nor did it quite lose it in six Days, nor

the Property of striking Purple with Galls, withwhich it struck a deeper Tincture, and retained this Property longer, than the German Spa. 4. It bears a greater Heat than common Chalybeates; for it tinged a deep Purple with Galls, when blood warm, nor did it cease to strike a Purple with Galls, though weaker, at the Degree of scalding hot; nor did it entirely loose this Property, when just boiled. 5. It bears Carriage better than the Poubon Water; nor is the Pyrmont Water so soon spoiled by the Air; having been kept a Summer and Winter without

Decay.

With Alcalis and other usual Precipitators, the Appearances were as follows, viz. Oil of Tartar, per Deliquium, precipitates from it a large whiteyellowish grumous Sediment. The like Appearance arises with Spirit of Sal Armoniac, and a white Incrustation upon the Sides of the Glass. It does not lather, but yields large Cuids with Soap. With Lime Water, a small yellowith grumous Precipitation With Solution of Sugar of Lead, a brownish white Precipitation. With Solution of Silver in Agua Fortis, a Copper-coloured Scum, and a large white-brown grumous Sediment. With Acids, whether mineral or vegetable, it makes a manifest Ebullition; and it was observable, that the Ebullition was much greater in the fresh Water, than in that which had been exposed to the Air; as also that it made a greater Ebullition with Acids, than did the German Spa. With an equal Quantity of Milk, Authors observe, that it prevents its Coagulation: in Summer Time; yea, that being mixed with Milk, preferves it from curdling four or five Days. With the tincluring Articles, the Appearances were

were these; with the Austeres, as Tea, Balaustine Flowers, and Galls, first a Blue, then a Purple, and then a black Colour. With Logwood, Blue; with Syrup of Violets, a deep Green; from Sena and Rhubarb, it drew deeper Tinctures, than did either common Water, or distilled Water.

From one Gallon of this Water, you may obtain about two Drams and two Scruples refiduum. This Residuum is of a pale brown, or white and reddish Colour; It is of a brackish Taste, and nauseously bitter; it does not so soon moisten in the Air, as the Residuum of several other It yields about one third Part of Salt, which is entirely different from the Salt yielded by the German or Pouhon Spa, not only in Tafte, but other Appearances; for though it excited an Ebullition, and an acid Vapour with Oil of Vitriol, (though less than the Salt of the Poubon Water) it made no Ebullition with other Acids, which the Salt of the Pouhon Water does: nor did it turn of a deep Green, with Syrup of Violets, as the Salt of Pauhon Water does, but only of a dilute Green; and its Solution yielded white Grumes, with Oil of Tartar, per Deliquium, and half a Dram of it, boiled with half a Pint of Milk, curded it strongly. All Physicians agree, that this Water hath many and great Virtues: as to its Manner of operating, it commonly proves diuretic, frequently sudorific, even to fuch as otherwise sweat with Difficulty: When the Humours abound with Salt or Bile, it commonly causes a breaking out on the Skin for a little Time. It commonly moves to Stool, and remarkably more than the Pouton Water, and it tinges the Stools blacker than other Acidulca, from from the greater Proportion of ferrugineous Principle it carries. And as to its Virtues; it corrects the faline, bitter, and sharp Humours, of the Stomach and Bowels, sweetens the whole Mass of Humours, tempers the Heat of the Blood, attenuates and dissolves all Obstructions of the Lungs, Kidneys, and small Vessels, and carries off all Impurities through the several excretory Ducts; and moreover, as it strengthens the Tone of the solid Parts, it prevents the fresh Accumulation of bad Humours.

It is of the greatest Efficacy, in all Disorders of the Stomach and Bowels; in pituitous, slatulent, and bilious Cholics; in the Worms; in paralytic Disorders, Convulsions, Cramps, scorbutic Disorders, Chlorosis, obstructed Menses, Relaxations of the Matrix, and Barrenness.

Ordinary bloody Fluxes are cured by these Waters, in a more safe and sure Manner, than by any other Method. They may also be very profitably drank, mixed with half Milk, and thus taken, are of great Use to gouty and scorbutic Persons.

The after Effects of these Waters, like those of the Bath, are confirmed by universal Experience, viz. that the greatest Benefit is received some Weeks or Months after drinking them: and there are Instances, where the first and second Year, the Water made no Alteration in the Distemper, nevertheless, the third or sourth, the Patients were perfectly cured.

Some Observations relating to the Method of taking them, may not be thought improper here.

The Water-drinkers at the Wells generally take from three to fix Pints, and find no Inconvenience, but good Effects from it: But in this Kingdom,

Kingdom, the common Practice is to drink them, with or without Wine, at Meals; and sometimes an Half-pint Glass besides, twice a Day, in the Morning and Afternoon, according as the Physician shall prescribe, and whose Advice we would recommend all Water-drinkers to take, before they begin their Course.

Of the Waters of Spa; those of Pouhon and Geronsterre.

A S these are the most celebrated, and of the greatest Antiquity of all the mineral Waters, and are the only true original Spa Water, from which the Name has been abusively transferred to all other mineral Waters, used medicinally, and are universally acknowledged to have a wonderful Efficacy in the Cure of many Disorders, we shall give a very minute Account of them.

Spa is a neat Village in the Parish of Ardenna, in the Bishopric of Leige, in Flanders, seated in a Bottom, encompassed on all Sides with Hills, and

on the North with steep Mountains.

The Soil is very barren, fo that without burning and liming, it would not produce Nourishment for the Inhabitants, and even with these Helps, yields them little but Rye and Oats. However, they are abundantly supplied with all things necessary to the Support of, or that may afford Entertainment or Pleasure to the Invalids, who resort thither, and at a reasonable Price.

As an Argument of the Wholesomness of the Place, it is observed, that there are scarce any Persons more healthy, or more long-lived, than

at Spa. In the Neighbourhood are Mines, from whence Sulphur and Vitriol are prepared; and by the acid Vapors whereof these Waters are pro-

bably impregnated.

The principal Springs are the Geronsterre and Poubon; the Geronsterre is to be drank only at the Place, as it will not bear Transportation; but the Poubon is transported into this and many other Kingdoms, and has been known, when well faved and corked, to keep perfectly good for two Years.

I shall first consider the Appearances, exhibited by the Waters themselves; and next, the Parts into which they are spontaneously or artificially resolved. And first, as to the sensible Qualities, the Water of the Pouhon Spring is of an acid and vinous, and then of a ferrugineous and vitriolic Tafte. The Geronsterre is of the fame Tafle; and moreover, at the Fountain-head, has a strong Smell and Flavour of Sulphur, even fo great as to refemble rotten Eggs, (and many of those, who drink it, are forced to hold their Nofes, whilft drinking) but this is loft by carrying it a little Way from the Fountain, and the Chalybeate Taste only retained. It is also observable, that the Geronsterre Water, though strongly impregnated with Iron and Sulphur, is remarkably cold; fo that those, who would deduce the Heat of mineral Waters folely from the Combination of those two Minerals, had need to look out for fome other Cause. The Geronsterre Water not only strikes the Nose, but affects the Head by its fulphureous Vapor, and creates Drunkenness of about a quarter of an Hour's Continuance. Few, if any of our English, Irish, or even German Chalybeate Waters, that I have examined or read of have the Sprightliness and Vinosity of these Waters, and which are also peculiarly remarkable for the Quantity of aerial Matter, they contain, which is so great, that they boil by mere Warmth, and burst the Bottles, when corked immediately after being filled. The Pouhon Water was not weakened by the Earthquake, which happend in 1692, but is much stronger since than before: but the sulphureous Smell of the Geronsterre is something weaker since that Shock.

With Alcalies and other usual Precipitators the Appearances in the Waters were on Experiments as follow: Soap lathers with both the Geronsterre and Poubon Waters, but not without previous curdling. Solution of Salt of Tartar produced only a fubtle white Cloud in them both; and the volatile Alcalies had a like, or scarce so much Effect. The Solution of Silver with the Geronsterre exhibited only a subtle Wheyishness, but with the Pouhon, turns bluish-white, with a fmall Sediment. Solution of Sugar of Lead with the Geronsterre exhibited only a subtle Wheyishness, but with the Pouhon, turns milky with a white Sediment. Solution of Alum with the Geronsterre, exhibited only a subtle Wheyishness, but with the Pauhon, a gross white Curd. Lime Water with the Poubon exhibited a yellowish grumous Sediment, greater than in Pyrmont Water. These Waters contain very little calcarious Nitre or calcarious Earth, With Acids, they both make a very confiderable Ebullition. The Geronsterre makes an Ebullition with Oil of Vitriol, and with Spirit of Salt, as does also the Pouhon; and with Spirit of Vitriol, and diftilled Vinegar, they make an Ebullition of a confiderable Continuance, Rhenish Wine also with fresh

fresh Pouhon Water excites a Smoak, Ebullition, and grateful Smell. Milk, boiled with the Pouhon Water suffered no Coagulation, but became rather more thin and fluid; Albumen Ovi and Saliva exhibited some Degree of Coagulation by the Pouhon. With the tincturing Articles the Appearances were these: Galls struck the Geronsterre of a claret Colour; Galls gave the Pouhon, at or near the Fountain, a brown reddish Colour: The Tincture of Galls gave the Pouhon here a deep Purple. The Geronsterre, with Sumach, turned of a Beer Colour. The Pouhon, with the Tincture of Sumach, turned of a Purple. The Cork in the Flasks of the Pouhon Water is always black. Green Tea turns it purple. Logwood gave a fine deep Blue to both the Pouhon and Geronsterre, which they retained for a Day or more Syrup of Violets foon turned the Geronsterre green, as it did also the Pouhon a Sea-green; which next Morning became a deep Grass-green. With Ash Bark, the Geronsterre exhibited a deep blue Circle, and the Mixture was dark coloured underneath. The Pouhon Water, being exposed to Air, foses its Transparency, and becomes whitish. The Sediment, in a Bottle of Pouhon, was a vellow, reddifh, Ochre-like Matter; it fomented with Spirit of Vitriol, and loft its Redness on being kept two Hours on the Fire. The Sediment of the Geronsterre is of a light Blue at the Fountain, but every where else of a dirty red Colour. The Sediment of the Poubon and Geronsterre agreed in the following Particulars: They made no Detonation on the Fire with Salt Petre, (as that of the other Fountains at Spa do. particularly the Tonnelet and Sauvenir :) Being put in a Crucible on the Fire, they emitted a Fume

Fume like that of burnt Iron, and blackened the Decoction of Galls: Hence it is concluded, the Suphur they contain is not the common, but a metallic Sulphur. Five Ounces of the Poubon Sediment gave 30 Grains of a Salt, piquant, fat and bitter: Five Ounces of the Geronsterre Sediment, gave two Scruples of a bitter and very pungent Salt: Both these Salts made no Ebullition with Acids, and both changed the Decoction of Galls white.

Their VIRTUES.

In order to give a more particular Account of the Virtues of these Waters, we shall previously describe some of their most remarkable sensible Effects and Operations. They are diuretick, sometimes cathartic, and always tinge the Stools

black, as they do also the Teeth.

They help habitual Costiveness, (proceeding either from an Obstruction of the Gall Bladder, or from an acid Discracy of the Blood) and they also help an habitual Laxity of the Belly by firengthening the Fibres. They promote the Menses, being the best Remedy known in the Chlorofis; and yet they do not less powerfully stop their inordinate Flux; and though they are diurctic, yet, by their corroborating Quality, they are found to be a good Remedy in Incontinence of Urine and the Diabetes. They are fuitable to both Sexes and every Age; even Children and old Men, with proper Advice, may take them with Advantage: And Women with Child may take them fafely, but more sparingly than others, from the fourth to the seventh Month of their Pregnancy. They are cooling, quenching Thirst much more than common Water; allay Inflammations; temper the Heat of the Liver;

yet they heat, where there is too great Coldness; dry, where Moisture abounds; and moisten, when Dryness prevails: They contract in Relaxations, and open in Contractions; and they both cleanse and heal.

They exhilerate and affect our Spirits with a much more kind and benign Influence, than Wine or spirituous Liquors. They incide and absterge viscid and tartarous Humours, cleanse the Blood, strengthen the Stomach by their Astringency, and corroborate the Nerves.

Over the Fountain of Pouhon are engraven the

following Lines, expressive of its Virtues:

Obstructum reserat, durum terit, hermida siccet, Debile fortisicat, si tamen Artebibis.

It is very observable of these, as well as of the Pyrmont Waters, that their good Essects are frequently not found, till a considerable Time, six Weeks or two Months after drinking them.

This Water kills Worms, Frogs, Lobsters, and small Fishes; and egregiously kills and expels Worms, and all Sorts of Insects in the human Body, even by Urine.

Externally.

It cures Diseases of the Tonsils from Relaxation by gargling, helps loose Teeth and pendulous Breasts, Ozenæ, and all phagædenic and dysepulotic Ulcers; injected into the *Urethra* it cicatrizes Ulcers, and by its repelling Virtue prevents the Regeneration of Caruncles there.

It helps the Fluor albus, not only by Drinking, but by Injection into the Womb, and greatly relieves Ulcers of the Womb by its deterging, drying, and cicatrizing Quality: It also helps a Schirrhus

Scirrhus and Cancer of the Womb by Injection.—It helps the simple Gonorrhea by drinking, injecting, and bathing; and fortifies the Parts of Generation, weakened by Gonorrhea's.—It is serviceable in veneral Aphtha, and Ulcers in the Mouth and Tongue, and elsewhere, when the Ulcers are hard to dry, (the Virus being first taken away) being used in drinking, Injection, and Fomentation. And lastly, it cures the Itch and Pustules, by washing, bathing, and drinking.

Internally,

Notwithstanding the actual Coldness of these Waters, they are of great Use in the Cure of Catarrhs, partly by drying up, and partly by evacuating the serous Humours. In Palsies and Tremors arising from Catarrhs, and in Spasms, they are of Benefit; and also in Megrims and inveterate Diseases of the Head.

In tough Phlegm collected in the Lungs they are profitable, as inciding and abstersive; though forbidden in Ulcers of the Lungs, lest they should too much irritate. They are said to be a Specific in the Scurvy; to be very helpful in the Leprosy, and in a Scabies in the Body, or in the Neck of the Bladder; also in Pustules from Bile and salt Phlegm; in Redness of the Eyes, by drinking and washing; in red Spots in the Face, and in red pimply Faces, proceeding from hard drinking; they are good also in Erysipelas, and in scorbutic Hæmorrhages.

They are excellent in many Disorders of the primæ Viæ, as in the Diarrhæa, Dysentery, and Lientery, carrying off the morbisic Matter, and corroborating the Intestines; they are of great Service to weak or relaxed Stomachs; and even

in Vomitings, obstinate and inveterate; and they are of Benefit in four Belchings, Cholics, and

Hickups.

They no where exert their Efficacy more manifeltly, than in Obstructions of the Liver and Spleen, and cure the Scirrhus of either, if not confirmed; and are restorative in a Macies from an Obstruction of the Mesenteries and Liver.

Many have been cured of the Jaundice by them; and they are deemed Specific in hypochon-

driac Affections.

They cure intermitting Fevers; they temper the Heat of the Kidneys, take away the Heat and Smarting of the Urine, and affuage Pains of the Kidneys and Bladder: They prevent a Concretion of Sand and Generation of the Stone, and deterge and expel Sand better than any other Remedy, and by continual Use, take away the Cause of the Stone and Gravel.

They cure Barrenness in Women, arising from too great a Moisture and Relaxation of the Womb.—Ulcers in the Sphincter of the Bladder have been often cured by them; and they are an excellent Remedy for a Fiscula from an ill cured

Abscess in Perinæo.

The Method of using them.

I shall conclude by describing summarily, First, the Season proper for drinking these Waters: Secondly, the Preparation of the Body previous to drinking them: Thirdly, the Quantity to be drank, and the Manner of drinking, and the Diet and Regimen to be observed during the Course. Fourthly, the Time requisite to continue drinking; and lastly, what is necessary to be observed after the Course is shifthed.

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First as to the Season; a ferene and dry State of the Air is undoubtedly the best; the Water being weaker in rainy weather: And indeed, it is observable, that they are weaker in cloudy weather, and such as feems inclined to rain, than during the Fall of the Rain itself. Now as the Summer Season is generally the most serene and dry, as well as the most commodious for the Exercise to be used in the Course; this is undoubtedly the best Time, and chiefly from May to September: But yet these Waters may be drank with very great Advantage in the very Midst of Winter, and especially in the Time of great Frost, when they are most acid and strongest of all, even stronger than in the hottest Weather: But those who drink them in Winter, should do it by a warm Fire, or in a warm Chamber. Secondly, It is necessary, previous to the Use of these Waters, to cleanse the first Passages by a gentle purgative Potion, or Electuary, as the Lenitive, or Caffia, and fometimes by a Vomit, which the Water itself now and then effects, which is not to be discouraged, and sometimes an Emetic from the Shops may be requisite. It has been observed, that the Waters have disagreed, when previous Purging has been neglected, when after it, they have agreed well. Thirdly, as to the Quantity to be drank, the Manner of drinking, and the Diet and Regimen to be observed during the Course. It is certain from Observation, that those are much more benefitted, who drink large Quantitles, than they that drink small: But the only certain Measure to be settled, is that Quantity which the Stomach can bear without Heaviness or Uneafiness; so that the greater Quantity any SPA, POUHON, and GERONSTERRE.

one drinks, the better, provided the Waters país off well. It is adviseable, however, to begin with drinking from one Glass or two, to three or four, each containing ten or twelve Ounces: Or to begin with a Pint and increase the Quantity daily, until one arrives at that Meafure, which the Stomach will transmit; and continue that Dose daily. during the Course; and to finish by lessening daily the Quantity in the like Gradations, with

which it was increased in the Beginning.

It is good to warm the Veffel out of which one drinks, with hot Water. The whole Quantity taken each Morning, should be drank within the Space of one Hour. After fimithing each Morning's Drinking, as above, it will be convenient to use Exercise for some Hours, as by walking, or by riding on Horse-back, or in a Chariot, which is rather better than walking, as it promotes Urine rather than Sweat, which is more agreeable to the usual Course of the Waters, and Manner of their Discharge. When the Summer is cold and Winter-like, drinking them in Bed, or by a Fire, and applying warm Napkins to the Stomach, is recommended. If the Waters do not pass, but flignate in the Guts, which is known by Wind, Tenfion or Heaviness in that Region, give a Clyster of the Water and Hiera-picra. the Belly be not naturally soluble; let it be kept fo daily. When the Waters are paffed in almost an equal Quantity, to what has been drank, and the Urine from a watery Colour is turned to a Yellow, then it will be proper to dine; and let the Dinner confift of Food of easy Digestion, as Pullete, Capons, Partridges, Pheafants, Thrushes, &c. Mutton, Veal and (Beef of three Years old may be allowed) Rabbets also and Hares; Trouts,

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Pike, Gudgeon, &c. Bacon, Eels, Tench and Carp are forbidden. At Dinner, Wine, without Water, should be drank; and particularly Mofelle, or other white Wine, as favouring the ordinary Passage of the Waters by Urine. No Water is to be drank after Dinner. Water-Drinkers are also advised to avoid sleeping in the Afternoon, to go to their Lodgings early, avoiding the Night-Air, and other Occasions of Cold; to abstain from Venery, as very prejudicial, and to banish all Grief and Inquietude of Mind, as a mortal Enemy. They are also to sup early and light; on fuch as boiled Eggs, or Broth; or indeed not at all, that the Stomach may be empty at the Time of drinking in the Morning: in order to which, they are to rife early, and walk about half an Hour before they begin to drink the Waters, without heating the Body: for moderate Exercise disposes it to pass the Waters the better.

Fourthly, As to the Time of continuing the Use of the Waters; it is ordinarily extended from twenty to thirty, forty, or fifty Days: But a much longer Term is necessary, even a whole Year or more; in obstinate and inveterate Diseases, great Obstructions of the Viscera, Ulcers

of the Kidneys, the Stone, &c.

Lastly; at the End of this Course, it is not less necessary to purge than at the Beginning; for a more frequent Flux of Urine has been observed to have attended for some Weeks, after leaving the Use of the Waters: And in some, Abscesses have been formed in several Parts, even two Months after their leaving the Waters; and therefore it is adviseable, that the same Regimen that was used at Spa, should be continued at least for a whole Month afterwards.

Of the SELTZERS WATER.

THIS Water comes from a Spring near a Town, called Neider Seltzers in the Archbishopric of Triers in Germany.

It is limpid, and on pouring from one Vessel to another, gives plenty of Bubbles; and is of a Taste, not so Pungent and Subacid as Others, but somewhat Lixivious.

It Putrifies more eafily, than any other Medicinal Water in Germany; and therefore to keep it, it is requifite, that the Bottles be well filled, Corked and Pitched.

The Solution of Salt of Tartar gave it a Milky Colour, but caused no Precipitation. Here it curdled with Soap; and with Solution of Silver, a gross white Cloud and some Curd was precipitated from it.

With Acids, not only the Strong, but even with the Weakest it makes a great Ebullition; and with Rhenish Wine and Sugar it yields a Smoak, some Hissing, and Bubbles in great Plenty.

If Spirit of Vitriol be added to this Water to the Point of Saturation, and then the Mixture be exhaled, it leaves a Salt, like the Tartarum Vitriolatum: and if the Water be mixed with Spirit of Nitre, and evaporated to the Confishence of Chrystallization, it is said to afford a Nitrum Cubicum, (as an Argument of marine Salt)—Syrup of Violets gave it a green Colour. Gauls gave no Tincture to the fresh Water; but here a blue Circle at the Surface, and a Wheyishness below: Sumack gave it a deep Green, especially in the upper Part of the Mixture; Rhubarb gave it an Orange

Orange Colour: and Ash-Bark a deep blue Circle at the Surface.

Two Pints, exhaled by a mild Heat, gave feventy-two Grains of a Saline Matter: on this if Oil of Vitriol be dropped, a whitish penetrating acid Vapor ascends, like what arises from Oil of Vitriol and common Salts; a fecond Argument of some Sal Marine: This Sediment, however, being diffolved and filtred, yielded two Scruples of pure alcaline Salt; which is the largest Quantity of Alcaline Salt yielded by any medicinal Water in Germany; the Salt is lixivial and brackish. The same Salt turned presently of a bright green, with Syrup of Violets, made a great Ebullition with Vinegar, and rubbed with Sal Armoniac, emitted a pungent, volatile Spirit: and the Solution of Mercury Sublimate corrofive- added to the Solution of this Salt, gave an Orangecoloured Sediment, from all which Appearances. the Alcaline Nature of this Salt abundantly appears: yet it differed from feveral of the native Alcalis, in that being rubbed on Beef, in Solution or Substance, it did not redden it.

The Operation of the Seltzers Water is but little by Stool, but chiefly by Urine; and as it is sparingly impregnated with a Mineral volatile Spirit, it is of a mild Operation; and for this Reason, is prescribed, not only safely, but often with the greater Advantage to Persons weakened, emaciated, and to those, whose Lungs are vitiated; also to the Scorbutic, and to those, who are troubled with spasmodic Affections: and there is not a more present and certain Remedy than the Selteran Waters mixed with Asses or Goats Milk, in diluting crude Humours, tempering and correcting the Discrasy of the Blood and Humours in the Gout, and composing spasmodic Affections of the Nervous Parts.

It is affirmed, that the People in the Neighbourhood drink these Wates mixed with Rhenish Wine in equal Quantity; and that they, who thus drink them, are observed to be less liable to the Gout, Gravel, Stone, Rheumatism and Scurvy, than Others: that in the Heart-burn. attended with viscous Humours in the Stomach. this Water taken to a Quart in the Morning, and a Pint in the Evening, is an excellent Medicine: that it hath been of Service in an Anafarca, allo in the Gravel and Stone; and in malignant putrid Fevers, mixed with Lemon Juice, it hath been used to good Purpose, as a common Drink: And in the 10th Tome and 85th Observation of the Alla Academia Casarea, we are informed of an Atrophy and Hectic, from the Venereal Difease, and, after the Mercurial Salivation, Guaiacum and Sarfa Decoction had been used in vain, cured by drinking two Parts of Seltzers Water and one of Goat's Milk warm, in the Morning a Bed, from half a Pint, gradually increased to a Pint and half, for fix Weeks; whereupon the Thirst, Heat and colliquative Sweats vanished, and a compleat Recovery enfued: and a fecond Instance is given of a Person in the like Circumstances, who, after a Salivation, fell into an Atrophy with colliquative Sweats, and was cured by drinking the Seltzers Water and Goats Milk, in the fame Proportion, for ten Weeks: and though the fuffered some little Relapse and Menaces of the Atrophy returning about the vernal Equinox, by repeating the same Method yearly for three Months, she was entirely restored.

N. B. The Accounts of these German Mineral Waters, and also of the other mineral Waters mentioned at the End of Dr. Russel's Dissertation on Sea Water, are taken from and Abstracts of a very ingenious Performance of Dr. Rutty's, intituled Synopsis of Mineral Waters; and to which for a fuller and more physical Account of the Virtues thereof, we beg leave to refer our Readers.

Of the MALVERN WATERS.

HERE are two Springs, which more peculiarly deserve Notice. The Source of one is about a Quarter of a Mile below the Village of great Malvern: This is a light and very plea-fant Chalybeate. The Other rifes higher up the Hill about the Mid-way betwixt Great and little Matuern, and has been long distinguished by the Name of the Holy Well; having for more than a Century been famous for the Cure of many obstinate Diseases. These Waters have been analysed by Dr. Wall, an eminent Physician at Worcester, and many Experiments and Observations made thereon by him; and as that ingenious Gentleman has favoured the Public with an Account of such Experiments and Observations, and also of a Number of very extraordinary Cures performed by them, we think, it will be most fatisfactory to our Readers to give them an Abstract of what that learned Phylician hath faid concerning them.

Both these Springs, the Doctor says, are of uncommon Purity. In the Year 1743, after a very dry Season, he evaporated three Quarts of the Holy Well Water in an open Silver Vessel; when only the Bottom of the Vessel was tinged with a pale yellow Colour: A Proof that the Water contains some bituminous or oily Parts. And last Year after a long wet Season, when the Source must have received some Foulness from the Mixture of extraneous Bodies washed into it, by the continual Rains, two Quarts of this Water being carefully and slowly evaporated, lest only half a Grain of Earth, and a very inconsiderable Quantity of a Saline Matter, too small to be estimated: probably not the 60th Part of a Grain.

This extraordinary Purity seems to be the distinguishing Characteristic of these Waters; in which Respect, they greatly exceed any, that

have hitherto come to our Knowledge.

The purest Waters in the City of Worcester contain more than 50 times,

The Hot Well at Briffel 20 times, And the Spring at Harwich Hill, near this City, which has been always thought extremely pure, contains 12 times as much
Earth, as the
Holy Well
Water at
Makverndoes:

It may be proper here to observe, that this Earth (by which Word we mean the Matter lest upon the Evaporation of mineral Waters, when perfectly cleared of all Salts) is soluble only in part by the strongest Acids; but that the much greater Portion of it eludes their Force, and even the Violence of Fire itself: much less therefore can it be conquered by the digestive Powers of the human Body. Those Waters consequently must be most salutary, which contain the sewest of these insoluble Particles. The Chalybeate Spring approaches the Holy Well nearly in Point of Purity:

rity: for two Quarts of this are found to contain only one Grain of Earth, one Grain of Iron, and nearly the same Quantity of a muriatic Salt, which grows moist in the Air, and therefore appears to be Bittern. On this Account, it feems to challenge one of the first Places amongst the Waters of this Class: for though it be not so highly impregnated with Iron, as some others, yet it is fufficiently fo to answer all our Expectations from it as a Chalybeate; and being much less loaded with Earth than any other, it feens probable, that the ferruginous Particles will for that Reason be more readily and intimately mixed with the Blood and Juices, whilst the Water, by its extreme Purity, pervading the finest Vessels, washes away the acrimonious Salts and obstructing Viscidities.

From the most accurate Analysis, it appears, that at the Spring Head, Pouhon Spa Water contains four times more of the Chalybeate Principle, than this Spring; but at the same Time is loaded with four times more Earth. Tunbridge Water contains three times more Iron, but has fix times more Earth. Cheltenham and Scarborough Waters have only the same Quantity of Iron, but are very much loaded with Earth. Cheltenham Water in particular contains eighty-eight times more than this Spring. And to instance no more, Bath-Water has nine times less of the Chalybeate Principle, and contains twenty-eight times infoluble Parts more than the Malvern Water does.

Thus far the Purity of the Waters, in respect of Earth, has been considered; but they are also possessed of a mineral Spirit, and some other Principles, not so easily discoverable by Experiments, to which notwithstanding their Virtues may pro-

bably be in a great Measure owing.

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The Water of the Chalybeate Well at the Spring Head, instantly strikes a fair Purple with Gauls; and if carefully taken up and close corked, will retain the same Property several Hours; but the Colour gradually grows more and more pale, and at last approaches to the Orange. The Water of the Holy Well, when drank immediately as it comes out of the Hill, leaves a peculiar Pertness in the Throat. This is by some likened to the Taste of Brass or Alum, and is most perceptible by those, who have not been used to the Water; but this Taste is soon lost, and the Water grows softer after it has been kept some Time, though the Bottles be ever so carefully stopp'd.

With this Water either Acids or Alcalies mix without the least Alteration in Transparency, and without any Precipitation or Conflict. And yet, it seems to contain a concealed Acid, because Iron laid in the Water is corroded; and a Solution of Silver, though at first it mixes without any Milkyness, yet by standing some Time the Water grows gradually whitish, and then muddy, and of a dirty reddish Purple, and at last a Powder of a deep purple Colour is precipitated: which is the Effect of the Vitriolic Acid. A Solution of Soap in Spirit of Wine being poured into this Water, produces a very pale pearl Colour, but without curdling in the least. This Colour is much less milky in dry Seasons than after much Rain: a Proof that the Water is more pure in the former. Upon the Whole, the Efficacy of this Water feems chiefly to arise from its great Purity; whereby it is enabled to pass through the smallest Veffels, and not being loaded with any Salts or Earth, is capable of diffolving more than those Waters, which are already faturated with them.

Its Effects externally, both in Lotion and bathing, may, in a great Measure, depend upon the same. Since it is past all Doubt, that Fluids may enter the Body this Way by the absorbing Vessels; and that those will be most easily admitted, which are purest and least loaded with heterogeneous Particles. And as Waters, which are full of styptic or insoluble Earths, are well known to occasion glandular Obstructions; so, vice versa, pure elementary Water seems to be the more efficacious of all Remedies in these Disorders.

But beside this extreme Purity, this Water must be affisted in it's Action by a volatile mineral Spirit, which it appears to contain, as well as by the bituminous, or oily Parts; and probably by fome others not yet discovered. For, however the Methods of examining Mineral Waters may have been improved by the Sagacity of later Chymists, we are certainly still very far from Perfection in that Point; and perhaps, the most active Parts of Waters, on which their Virtues chiefly depend, may lie fo much out of our Reach, as not to be the Objects of Sense, or discoverable by any Experiments. Let any one examine the most curious Analysis of Bath or Spa Waters, hitherto published, and he must necessarily be convinced of this Truth. Some Preparations of Antimony and other Minerals will, we know, communicate very extraordinary Qualities to Liquors in which they are infused, and yet as nothing discernable is loft by the Mineral, fo nothing could by any Analysis, be discovered in the medicated Liquor. May not Waters therefore be impregnated in somewhat the same Way, by Effluvia from mineral Substances; and perhaps from some hitherto unknown to us, and whose Properties therefore we are

are unacquainted with? And who will venture to affert, that there may not be many such in the Bowels of the Earth? But whether by any Experiments we can discover the principal Contents of this Water, or not, so long as it is found to produce such extraordinary Effects, we may rest satisfied. And Experience here speaks loudly in its Favour, it having been long used with the utmost Success in the following Disorders.

Their VIRTUES.

In all Diseases of the Skin or cutaneous Distempers these Waters are the most powerful and effectual Remedy ever yet found out; fince they not only remove all Eruptions and Foulnesses of the Skin, but have perfectly cured even the most confirmed Leprofies; as appears by the most undoubted Testimony. They are also of the utmost Benefit in all scrophulous Cases, Tumours and glandular Obstructions; also in scald Heads; in all old Sores, and even in Cancers; and there is undeniable Proof, that they have perfectly restored to Health many Persons, who have been afflicted with the Kings-Evil in the most miserable Manner: They are of prodigious Service in all Inflammations and other Difeases of the Eyes; they have also been found very beneficial in the Gout, Stone, Scurvy, and all cachetic bilious and paralytic Cases; in inveterate Disorders of the Head, and also where the natural Discharges of the Sex are deficient, which they affift by procuring a due Fluidity of the Humours.—there is one Diforder, however, in which these Waters are found not to agree, which is the Cardialgia or Heartburn.

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In cutaneous Diseases, the internal Use of the Water is apt, for some Days, to increase the Eruptions; but by longer Continuance it washes them off, and clears the Skin. In scorbutic Habits also, it produces similar Effects, when applied externally; but by continuing it's Use, all these angry Pimples are commonly foon healed, and difappear. These Effects were very remarkable in Mary Dudley and John Townshend, both In-Patients of the Worcester Infirmary: The former of these was received for a scorbutic Ulcer in the Lez, of long standing, attended with a great Defluxion on the Parts, and a large Eruption over the whole The Ulcer was digested and filled with Flesh, but could not be cicatrized by the usual Dreffings; till at last, by drinking Malvern Water, and applying Linen to the Sore, kept conflantly wet with the fame, it was perfectly healed in a Fortnight. The scorbutic Eruptions were, for the first four or five Days, prodigiously increased over the whole Body; and particularly the Parts which were covered with the wet Rags, appeared intenfely red, from innumerable Pimples which were brought out by the Water; but they went off by persevering in the same Regimen and Application. During this Course she accidentally had a Fall down Stairs, by which her Leg was much bruifed, and a lacerated Wound made on the Shin, almost down to the Bone: She did not mention this to her Surgeon, but only applied the Water to it, in the same Manner as had been directed for her other Leg, by which the Wound was healed in three or four Days. - John Townshend had been in the House from June 19, 1756, for a scrophulous Ophthalmy; to remove which, he had taken the most powerful Medicines, and various

various external Applications had been tried ineffectually. Indeed his health very visibly declined, and there appeared great danger of his falling into a Hectic. At length, on February 14, 1757, he was put upon the Use of Malvern Water, both internally and externally; by which, in a few Days he found a great Alteration for the better, both with regard to his Health and his Eyes, and was discharged, greatly relieved, on the 9th of April, 1757; since which Time he has constantly persevered in the Use of the Water, and is now

perfectly cured.

The Waters, upon their first Use, create in fome a flight Nausea; others they purge briskly for three or four Days; but are diuretic in all. The former Effects are probably accidental, arifing only from their being taken in too large Quantities, or from their disfolving some acrimonious Salts, or bilious Foulnesses, in the first Paffages. Persons who have been used to Malt Liquors they commonly render costive: But there are Instances, where the Waters, after having been drank a confiderable Time, suddenly take a Turn downwards, and purge briskly. Such an Effect they had upon the late Edward Popham, Efg. of the Lodge, near Tewkesbury. This Gentleman was quite crippled by the Gout, and had in a manner loft the Use of all his Limbs. The marvellous Cures performed at the Holy Well induced him, about ten Years ago, to make Trial of it. After he had drank the Water about a Month, a violent Diarrhæa came on, and lasted feveral Days, from which he found great Relief, recovering his Spirits, and in a great Measure the Use of his Limbs. And as a Testimony of the Benefit he had received, be built a Bath under

the Spout; the antient one being in a very ruinous Cendition. Dr. Wall always advises his Patients to drink freely of the Water for some Days, or Weeks, before they use them externally. The empirical Method of Application, which has hitherto been successfully practised, is to wash Sores, Tumors, &c. under the Spout, feveral Times a Day; covering the Parts afterwards with Cloths dipt in the same Water, and moistened from Time to Time, as often as they grow dry. - Those who bathe for cutaneous Foulnesses, usually go into the Water with their Linen on, and dress upon it wet. This Method, odd as it is, has never yet, that I have heard of, been attended with any ill Consequence; though I have known it used by several very tender Persons. A Gentlewoman in Worcester applied the Water to her Legs, on account of a violent and very painful scorbutic Eruption in those Parts. She lay every Night with her Limbs wrapped up in wet Linen, and yet never received the least Cold from it. The painful Itching is relieved by nothing fo foon, or fo effectually, as by this Application, the therefore has always recourfe to it, whenever the Disorder makes a fresh Appearance; and always finds Ease and Advantage from it. A Boy, aged eleven Years, and Leprous from the Birth, was last Year sent to the Springs by an eminent Physician, who had before tried various Methods with him unfuccessfully. He continued at the Holy Well about three Months, and was kept constantly wet over his whole Body, all that Time. He went home perfectly cured, and I hear continues well.

. A young Gentleman of Fortune was last Year brought to the Springs, on Account of a scrophulous

lous Disorder in his Foot, and Elbow. When he first came there, he was much emaciated and hectical, and had a dry troublesome Cough. The Cough and other hectic Symptoms went off entirely in less than a Month, notwithstanding he constantly kept the diseased Parts wet with the Waters, so far was he from taking Cold by the Application. There is at prefent great Reason to hope, he will find a perfect Cure, of which, when he first came, there appeared not the least Probability: for feveral of the Bones in the Foot were foul and greatly enlarged, as were also the Pones at the Elbow, and many finous Ulcers in both Parts: the Leg and Arm being also much emaciated, and the latter almost rigid. Limbs have now recovered their Flesh, and he has a considerable Degree of Motion in the Arm; the deep Ulcers both in the Elbow and Foot are healed, and the Integuments stick down to the Bones; nothing now remaining, but two very superficial Ulcerations, which are clean and disposed to heal.

When the Water is applied externally, especially to old Sores or glandular Obstructions, it is apt at first to bring on a slight Fever and inslame the Parts. This adventitious Heat is commonly soon relieved by drinking freely of the Water, which washes out of the Habit any morbid Particles which may have been received into the Circulation, and the Fever usually goes off in sour Days at surthest. Sometimes, when the Water is applied to indurated Glands, or incysted Tumours, the Heat rises higher, so as to bring on Suppurations; an Event by no means to be dreaded, since thereby the viscid stagnant Juices are attenuated, concocted, and so sitted for Evacuation,

and

and the Circulation (which in scrophulous Perfons is usually too languid, either from a Lentor in the Fluids, or too great Debility in the Fibres) is accelerated and invigorated. The common People are, from long Observation, so well apprised of these Effects, that they think the Assistance of a Surgeon is upon no Occasion necessary; and their usual Phrase is, that Water will break any Tumour, and afterwards heal it. This, as many other popular Opinions, is very erroneous: for granting the Lotion to be one of the best Applications in fuch Cases, yet it certainly may require the Hand of a skilful Surgeon, to open the Abscesses, or dilate Sinuses; to prevent the Lodgment of Matter, or procure a free Discharge by a proper depending Opening. After this is done, the Water is perhaps the best Dressing that can be applied, and feldom fails to effect a Cure foon, which, without fuch Affistance, might be uncertain, or at best very tedious.

For a more particular Account of the Virtues of these Waters and the extraordinary cures performed by them, we would refer the Reader to

Dr. WALL'S Book.

N. B. As having these Waters, and indeed all others, genuine, is of the greatest Confequence to those, who drink them, we can safely recommend the Malvern Water that is sold by Mr. OWEN (Successor to the late Mr. Eyres), at his Mineral-Water Warehouse in Fleet-Street, as being filled and sealed under the Inspection of Mr. Davis, Apothecary and Chymist in Worcester; who together with Dr. Wall of the same City, bath made many ingenious Experiments on these Waters.

FINIS

NEVIL HOLT WATER

(With the other Waters hereafter mentioned are fold Wholefale and Retale by W. Owen, at Temple-Bar) of which Dr. Short observes,

HAT from thirty-five Years Use, and surprizing Success of NEVIL HOLT WATER in a great Variety of Diseases and Constitutions, it is found chiefly appropriated and adapted to sanguine, bilious, plethoric, and inflammatory Habits; it being cooling, thinning, resolving, and promoting the Expulsion of noxious Humours, braces and strengthens the Body, corrects and thins sizey, saline, acrid and putrescent Juices, in which Cases it is specific, and greatly strengthens weak and relaxed Nerves and Vessels. Outwardly, it discusses, cleanses, and heals.

The Diseases wherein it is most eminently successful, (even where Medicines and other Waters have been inessectual) are Hemorrhages, either by Spitting, Vomitting, Stool, Urine, Menses, Piles, &c.

In hot Scurvies, Leprofies, ulcerated King's Evil, Venereal Diforders, feminal Gleets, uterine Weaknesses, Fluor Albus with a very strong Decoction of the Woods. — In Hectics, Beginning of Consumptions especially if drunk with a strong Decoction of Raifins, Liquorice, and Ground-Ivy, in Turnip-juice or Water.

Inflammatory Rheumatisms, attended with a high Fever, if a Bottle is drank every Night made into a Whey with half a Pint of boiling Milk, a Gill of white Wine, and an Ounce of Diacodium.

In dry Afthmas attended with little or no Spitting, or no Adhesion of the Lungs to the Pleura. In frequent Abortions, drunk either alone, or with a little Cinnamon-water, fwice or thrice a Day to the End of the Seven Months, it has rarely failed. In Inflammation of the Eyes, even when the Person has been some Time blind. It has cured some occult Cancers. It has effectually restored Constitutions shattered and almost worn out with Intemperance and Debauchery.

In the Stone and Grayel drank a whole Summer Season or two, it has not only cured, but prevented the Return of the Distemper. In habitual and violent Vomitings, Indigestion, and Want of Appetite. In feveral Agues. It cures Wounds and Ulcers. Effectually cures Worms and prevents their breeding. In short, it is a most sovereign Remedy in Diseases from too great Abundance of Blood or Bile, or a Congestion of them in any Part of the Body; and Diseases from an acrid Saltness of the Blood or Juices. Or in a Weakness or Relaxation of the Nerves and Vessels, or in any putrescent State of the Blood. But it is by no Means adviseable where there is a prevalent Acid, or flow, languid, fluggish Circulation, as in cold, phlegmatic Bodies, or where the Lungs are loaded with Phlegm, or where any natural necessary Evacuation is obstructed. In all chronic Disorders it should be used several Months, not as a purging but an alterative Medicine. Nor must Milk be eaten within two Hours before or after. The largest Dose drank at once should always be at Bed-time, half a Pint warm, and four or five Breakfast Tea-cups full of it, drank at any other Time of the Day. Tafte is disagreeable, put a little white Wine to it.

N. B. As it ouzes out of the Summit of a dry Hill, and only drops, it is impossible for any other Spring.

or Water to be let into, or mix with it.

Virtues of this Water, may be had of Mr. OWEN, Price 1s.



MINERAL WATERS,

Sold by W. Owen,

T His Mineral Water Warehouse in Fleet-fireet late EYRES's, which hath been established in its Reputation for near fifty Years, by the kind Encouragement of the Nobility, Gentry, the Faculty, &c. who may be affured of having the following Waters (from the great Call for them at this ORIGI-NAL WATER WAREHOUSE) always in the utmost Perfection, for ready Money, as hath been the usual Custom of this Trade, and at the lowest Prices. SELTZER, in large Stone Bottles; PYRMONT, in three-pint Bottles; GERMAN SPA, filled at the Poubon Spring, in whole and half Flasks; Bourne Water in large Stone Bottles; NEVIL HOLT WATER, from Dr. Short; BRISTOL Hot-well Water, from Smith. and Woodall; Haragate Spa Water; Wiltsbire Holt Water; TILBURY Alterative Water, from the original Spring; Cheltenham; Bath; Scarborough; Malvern; Jeffop's Well, or Stoke; Acton.; Dog and Duck; TAR-WATER, made from the right Norway Tar: and Sea-Water in its utmost Purity, taken up several Leagues at Sea. - Scarborough, Cheltenham, and Acton Salts.

N. B. The Foreign Waters are taken up at such times only, when they are in full Vigour, and approved by the Physicians both of Pyrmont and Spa, as will more fully appear by several Certificates under their Hands and Seals, as well as those from the Magistrates of Spa; who have in the strongest Manner asserted and recommended the Skill, Care, and long Experience, of my AGENT at Spa; in taking up the Poubon Water in the most proper Season, and at the only sit Times, and securing the Flasks after the most improved Method; most effectually to retain and preserve their Mineral Spirit. And as several sources have been taken both to Pyrmont and Spa,

to fettle the best Correspondence, in order to import the Foreign Waters in the utmost Perfection, so I have no doubt but they will meet with general Approbation.

Note, Bath, Bristol, Cheltenham, Holt, Malvern, Jessop's Well, Sea, Dog and Duck, and Acton Waters, come constantly fresh every Week.

To prevent Impositions, I beg the Favour of those who are pleased to honour me with their Commands, to direct that the Messenger or Agent do always bring back one of my printed Bills, with a Receipt, signed by their most obedient, humble Servant,

WM. OWEN.

This Day is published,

Price Three Shillings in Boards and blue Paper,

A Book very necessary to be perused by all Persons
who drink or bathe in Sea Water, as also those
who use any other of the Mineral Waters in GreatBritain.

Distance on the Use of Sea Water in the Diseases of the Glands. Particularly the Scury, Jaundice, King's-Evil, Leprosy and the Glandular Consumption. Translated from the Latin of Richard Russel, M. D. To which is added a Translation of Dr. Speed's Commentary on Sea Water. As also An Account of the Nature, Properties, and Uses of all the remarkable Mineral Waters in Great-Britain.

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Jean and or ...

